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A Scoring Guide for the Greenberger-Entwisle Need-Achievement Pictures.

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This manual describes the scoring procedures for the Greenberger-Entwisle Need-Achievement Pictures. This instrument was developed (1) to provide a set of pictures suitable for a wide age range of subjects, (2) to increase the comparability of findings, and (3) to increase the reliability of measurement. General instructions for scoring the Greenberger-Entwisle pictures are given, and the scoring categories are discussed in terms of typical problems and scoring rules. Stories are then considered individually for problems unique to each. The appendices consist of a set of the instrument pictures and a summary of the scoring rules. (Author/EK)

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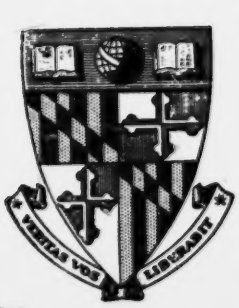

THE JOHNS HOPKINS UNIVERSITY

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A SCORING GUIDE FOR THE GREENBERGER-ENTWISLE NEED-ACHIEVEMENT PICTURES

ELLEN GREENBERGER AND JOHN KERVIN

DECEMBER 1968

A SCORING GUIDE FOR THE GREENBERGER-ENTWISLE NEED-ACHIEVEMENT PICTURES[1, 2]

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Ellen Greenberger and John Kervin

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[1]Individuals wishing to use this set of rules and suggestions for scoring the Greenberger-Entwisle pictures will need to familiarize themselves first with the normal n Ach scoring techniques outlined in McClelland et al. (1958). An earlier Center Report (Greenberger & Entwisle, 1968) describes the means by which the pictures were selected. A forthcoming Report gives extensive information on the validity of n Ach scores derived from this set of pictures and cites the populations considered suitable for the instrument.

[2]The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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For a number of years, the concept of need for achievement (McClelland, 1953)[1] has been central to a wide variety of research investigations and measured in a wide range of circumstances. Despite the scope of application, however, many of these studies lack comparability because the stimuli used --the pictures to which stories are written by subjects --vary from experiment to experiment. Furthermore, McClelland's (1958)[2] scoring instructions were developed in relation to a specific set of pictures, and while the general scoring principles are applicable to any set of pictures, they cannot, in fact, resolve all the problems that arise when attempting to score a different set of pictures. Scoring rules for stories elicited by pictures other than the original ones have not been communicated systematically by researchers to one another.

The Greenberger-Entwisle instrument was devised in part to remedy these shortcomings.[3, 4] First, it is intended to provide a set of pictures which is suitable for a wide age range of subjects and thus to increase the comparability of findings. Second, the detailed scoring instructions that accompany the pictures should insure increased reliability when these pictures are used. Differences in scoring styles

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[1] David C. McClelland, John W. Atkinson, Richard W. Clark & Edgar L. Lowell. The achievement motive. New York: Appleton-Century-Crofts, 1953.

[2] David C. McClelland, John W. Atkinson, Richard W. Clark & Edgar L. Lowell. "A scoring manual for the achievement motive." In Motives in Fantasy, Action and Society John W. Atkinson, ed.), New York: Van Nostand, 1958.

[3] Ellen Greenberger and Doris R. Entwisle. Pictures for Measuring Need Achievement. Copyright 1968.

[4] Ellen Greenberger and Doris R. Entwisle. "Need for Achievement, Curiosity and Sense of Control: Pilot Study for a Large-Scale Investigation." Center Report No. 20, The Johns Hopkins University, 1968.

can never be eradicated completely. Thus one scorer may be somewhat conservative, another more liberal in doubtful instances. Greater specificity of scoring instructions should lead in the direction of identical rank ordering of subjects, however, and this is an important goal.[5]

The plan of this manual is as follows. First, some general comments on scoring the Greenberger-Entwisle pictures are given. Then, the scoring categories are treated in turn for typical problems and scoring rules. Finally, the stories are considered individually for problems peculiar to each. The Appendices consist of a complete set of pictures in the Greenberger-Entwisle instrument and a summary of the scoring rules. In order to get a feeling quickly for the scoring rules, the reader may wish to look at the summary in Appendix B before studying the body of the manual.

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[5]For further comments on the problem of reliability see John W. Atkinson, Motives in fantasy, action and society. New York: Van Nostrand, 1958.

I GENERAL SCORING RULES

A major difference between the usual n Ach scoring and the Greenberger-Entwisle instrument is that, in the latter, achievement imagery is usually scored for only one character in the story -- the character with whom the subject is most likely to identify. The point of reference is the junior high school through college age group for which the pictures were devised. The key characters are listed by picture in Table 1. Thus, if stories are written for which the achievement imagery is centered around some other character, the story would be scored TI or UI, depending upon the role of the key character in the story's action. An exception arises in those cases in which it makes sense to regard the goals and activities of several characters as a joint effort. In such stories, there is the idea of a "team" working towards a single goal, or towards similar individual goals. Thus, in Picture 3F (number three, female series), a husband and wife might want to get a promotion for the former, or in Picture 2M a group of boys may each be trying to make a good project in shop class. In these cases, all the achievement-related imagery pertaining to any or all of the "team" characters is scored. The possible "team" combinations are also given in Table I.

Some stories have "nonsense" themes. Such stories should not be rejected summarily as having no achievement imagery. Keeping in mind that this is a projective technique, one can frequently find achievement

themes in stories that, at first sight, seem to contain only unrelated imagery. The following story is an example.[6]

Example 1 - 4F
Judy and Diane have found out that there are ant people. They took them and gave them Cheerio's to give them go power. They are trying to prove that they can make people out of marshmellow. They tried freezing them so they would live long. But as it seems, they all froze to death. (AI, I)

We now turn to the specific coding categories for further rules and specifications.

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[6]In most cases, examples are taken from actual stories written by 9th grade students, using their words and spellings.

TABLE 1

Key Characters for Scoring Achievement Imagery by Picture*

Story	Single Key Character	"Team" Key Characters
1M	boy seated at desk	-
1F	girl seated at desk	-
2M	boy talking to older man or any one of other boys	the group of boys, or any combination thereof (including man)
2F	girl at desk in foreground or girl at desk in background	any combination of the three except the man alone
3M	boy at bat, boy catching, boy umpire, or boy pitching (not visible in picture)	any combination of boys and girls except the two girls
3F	girl standing at window or woman standing outside	any combination of characters except the two men
4M	either of the two boys	the two boys
4F	either of the two women	the two women

*Note that some subjects may introduce characters not visible in the picture. These may be considered key characters provided that they are of the same sex and approximate age of the other key characters suggested in the Table.

II RULES FOR SCORING SPECIFIC CATEGORIES

Achievement, Task, and Unrelated Imagery (AI, TI, UI)

Because the pictures are fairly highly cued for task-type responses, the first sentence in most stories is picture description that almost invariably is scored TI. For this reason, one usually goes beyond the first sentence to decide in which of the three categories (AI, TI, or UI) the story falls. Of course, when there is only one sentence, the judgment must be made on its content. Similarly, those stories with just a phrase or a few words are scored UI unless there is sufficient evidence of AI or TI scoring. In cases where subjects do not write anything, UI is scored with the rationale that S has had an opportunity to emit some achievement-related response and failed to do so.

Example 2 - 1F
Sally was writing her composition for Home Ec. It wasn't easy. The night before her cat Sam had been hurt bad and she had stayed up all night helping him. Sam had become her cat ever since she found him last summer at their cottage in Mass. Her friends and her were walking. All Sally can think of as she writes her story is how much Sam had meant to her. (UI)

Example 3 - 1M
The kid is doing some school work. It is one boy doing his work. He's been bad and doing punishment work. He was in a fight. That he would get the kid he was in the fight with. To get the other kid back. The boy will get him. The boy will get him. Nothing. (UI)

Example 4 - 3M
Some kids (UI)

In McClelland's general scoring rules for need achievement, a concern with how well a task is being done is considered sufficient grounds for scoring AI. (McClelland, et al., 1958, p. 181). In practice, however, this scoring rule leaves much to the judgment of the scorer. Accordingly, several guidelines for discriminating between TI and AI stories have been adopted in relation to the Greenberger-Entwisle pictures.

The first of these is to consider the normal standard of work usually required by persons in the situation described by the subject. For example, students are usually expected to pass their exams, and concern with passing only, as opposed to getting a good grade, is not sufficient for scoring AI except under the two special conditions described below. Similarly, secretaries are expected to type letters with few mistakes and to correct those errors before letters are mailed. Housewives having guests for dinner are expected to have enough food and to serve it in edible condition. Likewise, a desire to hit the ball is expected of the batter in a baseball game. What indicates achievement imagery in these situations is the desire to perform <u>better</u> than average.

A second guideline concerns past deficiencies (Bp) which alter the usual TI interpretation of a story. When <u>mental</u> or <u>physical</u> limitations have been specified which make "passing" or "hitting the ball" a genuine achievement goal; or when failure in the past is due to <u>motivational</u> limitations <u>and</u> other elements of an achievement story are <u>present</u> (affect, instrumental activity, etc.), AI may be scored. The nature of

individual limitations and disabilities must be made very clear. In doubtful cases, do not score AI.

Example 5 - 4F
A girl during a science lab is making observations. She has been trying hard to solve the procedures, but always makes a failure, for she is not very intelligent. She thinks this time it is completed proper and will later try to prove it to the teacher. This time she is correct and has learned she can do many more from her procedure. (AI, I, GA+, BP)

In this example, the phrase "she is not very intelligent" makes possible the AI and subsequent scoring. Without the phrase, the story would be scored TI on the basis of the first guideline, since learning laboratory procedures is a normal and reasonable standard for persons in the story situation.

Example 6 - 1F
A girl who all her life had been paralyzed is learning how to write. She is 14 and an only child. When Elene was one month old she was in a car accident which paralyzed her from her hips up. And two weeks ago she had an operation to fix the pinched nerves. Elene is thinking of what a great privilege for her to be able to write and move her arms. She knows that it will be rough but she wants to learn. (AI, N)

(Note that BW is not scored because it is the main component of the story and not a block encountered <u>en route</u> to some other goal. Likewise, because of the appeals to sympathy, ATH is not scored.)

Another scoring difficulty is encountered in stories that seem to combine task imagery themes with unrelated imagery outcomes. It frequently happens that, even when the first sentence is ignored, the balance of the story is a mixture of these types of imagery. The general rule adopted is that, unless the unrelated imagery clearly outweighs the task imagery in

importance to the story, TI is scored. Note that this marks a deviation from the usual trend to "conservative" scoring. In Example 7, it is clear which type of imagery predominates.

Example 7 - 1F
She is doing her homework. The person is one of my friends. Before she did her homework she went to school to find out what her assignments were. Right now she is thinking about an algebra problem. The answer is wanted by her. If she does not get the problem, she will be punished by her algebra teacher. This will bring her grades down. Then she will get in trouble from her parents. Then she won't ever be able to date for a long time. (TI)

See also Example 3, in which unrelated imagery clearly outweighs task themes when the first sentence is disregarded, and which is therefore scored UI.

Expressed Need for Achievement (N)

Subjects frequently mention in their stories a variety of needs which are not strictly related to achievement goals. Some of these are easily discerned using the McClelland criteria; others are more problematic. In general, expressed needs for social approval, autonomy, curiosity satisfaction, avoiding punishment, and avoiding failure are not scored for N even though a story may contain other valid achievement elements.

An exception of sorts arises in cases where phrases similar to "She wants to make a good impression," are scored for N if it is clear that one story character wants to impress another by means of some achievement. In this case, accomplishing the achievement goal is the means to some other (in most instances, affiliative) end. If the presence of a subsidiary achievement goal in the story is not clear, or if the individual's intention is solely affiliative, N would not be scored. See particularly the instructions for Picture 3F for further elaboration.

Another prerequisite for scoring N is that the desire must be relatively internalized within the story character. Such internalization may be assumed except where there is implicit or explicit evidence that external obligation (e.g., being told to do something, or having a particular achievement defined as part of one's job) outweighs internal motivation in the character's actions. See the instructions for Picture 4 for further details.

The decision to score N cannot be based on inference. A definite goal statement of desire to reach an achievement by one of the characters, or by the author referring to a character in the story, is normally required. Difficulty may be encountered because of the guide questions printed on the story-writing page, especially, "What is wanted?"[7] Thus two possible responses are (1) "He wants to find the formula," and (2) "The formula." If it has been determined that finding the formula is, in fact, an achievement goal, both of these phrases should be scored for N. The general rule for cases like this is to assume the phrase "He/she/they want ..." in front of the phrase in the story, and then to judge for N on the basis of the completed sentence. It is, necessary, of course, to take into account the subject's answer to the question, "By whom?" in order to ensure that the need expressed refers to the key character. It frequently happens, for example, that it is the teacher who wants the boy to get the right answer in Picture 1, and N is then not scored.

Some words equivalent to "wanting" which suggest the presence of N are: hoping, wishing, praying, seeking. The word "dreaming" must be examined closely, for it often implies the imagination of some possible future state with little or no determination to work toward it. For example, "He is dreaming of becoming a doctor," does not demonstrate the same need for achievement indicated by, "He wants to become a doctor." Score conservatively when "dreaming" is encountered. The expression, "To hope everything turns out," and similar phrases are sufficient for N, providing that the goals they refer to qualify as achievement goals.

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[7] The questions printed on the story-writing page are "What is happening? Who are the persons?" "What has lead up to this situation? That is, what has happened in the past?" "What is being thought or wanted? By whom?" "What will happen? What will be done?"

Because N is not inferred from instrumental activity, the phrase "trying to" and similar constructions must be examined under the rubric of instrumental activity rather than expressed need for achievement. An exception would be, "They decided to try to find a cure if it took them the rest of their lives," which is scored N because of the very strong indication of the presence of the achievement motive.

Instrumental Activity (I)

Instrumental activity, overt or mental, is scored conservatively. It must be clear that the activity is an attempt to attain or facilitate the attainment of an achievement goal. The reason for caution is that the settings for most of the pictures strongly suggest mental or overt activity and (I) may arise merely as part of the subject's picture description.

Anticipation of Goal State (GA)

The major problem encountered in scoring anticipatory goal states is differentiating between the anticipations projected onto a character in the story, and those expressed directly by the author of the story. (In the latter case he seems merely to be "obeying" the printed rules which ask him to describe "What will happen?") The characters themselves must be the sources of the anticipation in order for GA to be scored. The difference is exemplified in the following two sentences: (1) I don't think they will succeed, (2) He doesn't think the experiment will succeed. GA would be scored in the second instance, not in the first. In doubtful cases, GA is scored, i.e., score GA unless the goal anticipation is clearly the story-writer's.

Example 8 - 4M
In the science department Dr. Jones and Dr. Smith are testing a serum. There has been p nty of sickness and they are trying to find a cure. If they are successful they will be able to save a lot of people. Then if someone has that sickness they will have the serum. (AI, I, GA-)

Because the sentence beginning, "If they are successful ..." is in response to the question, "What is being thought?", the story, though doubtful, is scored for GA.

Some of the words that suggest GA may be present in a story include: dreams, anxious, worried, expects, concerned, wonders.

Personal and World Blocks (BP & BW)

The only problem regularly associated with scoring BP and BW is what to do with unsuccessful experiments and projects in the past. There are two possible reasons for such failures: (1) the error of the experimenter or story character, and (2) "acts of God", or other circumstances beyond the character's control. The first would indicate BP scoring; the latter would not be scored at all, for events prior to the current action of the story are not scored in McClelland's scheme. The decision has been made in cases where the locus of responsibility is unclear to assume error on the part of the story-character and score BP, even when the problems being worked upon are very difficult (e.g., a cure for cancer). When it is clear that the reasons for past failures were beyond the character's control, no score is given.

Nurturant Press (NUP)

Scoring for NUP becomes problematic in several circumstances, including cases where the aid or sympathy is of no help to the character receiving it, help is offered after the goal has been completed, and the character to whom it is directed is unaware of the nurturant press. Scoring rules have been formed to deal with these instances. First, score NUP even when the nurturance does not in fact prove helpful to the recipient in attaining his achievement goal. Second, do not score NUP where the aid or sympathy rendered is irrelevant to the achievement goal, or is offered after it has been achieved.[8]

[8]An exception to the second rule arises in cases where it seems reasonable to assume that recognition for one's achievements forms part of the overall achievement goal. Thus, if a character succeeds in making a startling scientific discovery, and then receives assistance in making his work known to the public or significant other persons, such aid would be scored NUP.

Goal Affect (G)

G is scored when attainment or failure to attain an achievement goal creates pleasure and displeasure, respectively. McClelland (1958) also furnishes rules for making inferences about the presence of affect. This scoring category needs no further elaboration.

Achievement Thema (ATH)

The only point to be made in relation to scoring the Greenberger-Entwisle pictures is that the criteria are somewhat more strict than in McClelland's manual. As in McClelland, ATH is not scored where there is some other major plot in addition to the achievement plot, or doubt exists about the centrality of the achievement plot. In addition, one scores ATH only in cases where some sort of personal success is the primary motive of the key character or team of characters, and the tone of the story is serious (cf. "nonsense" themes discussed earlier).

In Example 1, ATH is not scored because of the obviously nonsensical nature of the story. In Example 5, the achievement motive is strongly present and ATH is scored. In Example 8, there appears to be a strong humanitarian concern, and so ATH is not scored.

III SCORING PROBLEMS ASSOCIATED WITH EACH PICTURE

We now turn to the pictures themselves to consider some of the scoring problems that arise in specific cases. Where the male and female pictures have similar content (Pictures 1 and 4), they have been considered together. Suggestions for one picture may be applicable to another. This is the case if picture four, for example, is interpreted by a story-writer as a job-testing situation, as picture 2F occasionally is. In such instances, the instructions may be carried over to help solve scoring difficulties.

Picture 1 - Male and Female

Usually for these pictures, imagery related to passing exams or courses is indicative of TI. To the extent that passing is the minimum level of achievement expected of students, it does not usually represent an achievement goal. Similarly, a story revolving around consequences of not passing, exemplified in failure or punishment references, is usually indicative of TI. (Recall McClelland's rule that positive achievement strivings must be present to merit AI scoring.)

Example 9 - 1F
She is studying her school work because she has not studied beforehand. Her name is Anne and she is a very large and unimaginativ. girl. She did not study at home and as there is going to be a test she must study in order to pass. She wants to pass and is very worried about failing. She does not pass the test, but she did learn that she must study at home. (TI)

Example 10 - 1M
John Smith, a senior in high school, is taking an exam. He has barely made it through school, and knows that if he fails this time, his parents will punish him severely. He is thinking about the exam and trying to remember the answers. He wants very badly to pass, but since he didn't study, he won't know the answers and will break his pen in frustration. (AI, BP, N, I, G-)

In some cases, however, AI scoring for passing themes is warranted, if there is evidence of both (1) great desire to reach the goal ("wants very badly to pass") and (2) passing represents a substantial achievement for the individual because of inherent difficulties he faces. In the example above, which presented a scoring dilemma (TI vs AI), AI was scored because of the two considerations just cited and because other achievement-related images are present: (I) and (G).

Passing themes may also cause some confusion where they are mixed with stronger imagery more deserving of AI, such as the desire to get a good grade. A particularly puzzling example occurs when story characters want to get a good grade on a particular test in order to pass a course for the year. In such cases, score AI unless it is clear that the task imagery outweighs in importance the achievement imagery in the story.

Example 11 - 1M
Joe hurridly filled in the answers to his mid-year exam. Each minute counted because of the tremendous length of the test. Joe knew that he must get a good grade on this test because his grade was hovering near the failing mark. If Joe could get at least a B on this test he know he would pass. The next day Joe found he had passed the test. (AI, N)

In this example, GA is not scored because the anticipation of passing does not refer to the achievement goal, which is getting a good mark on the test.

Frequently stories written to these pictures portray students in situations where they "want the answer" to a question. By itself, this phrase does not merit AI scoring (or N) because it is not sufficiently suggestive of a concern with superior performance. Like passing, wanting the answer is a minimal behavior expected of students. However, in cases where this is elaborated to wanting to know how to do a problem or similar desires with emphasis upon means, the concern with the acquisition of generalizable skills and the quality of performance merits AI scoring.

Example 12 - 1M
A boy is doing his homework in math. He has encountered a tough problem and is wondering how to do it. He is trying out several ways. He wants to know how this type of problem should be done, and he'd like to do it the right way. He won't be able to do it this time, but neither will any of the others in the class. (AI, N, I, ATH)

Picture 2 - Male

Acquisition of a new skill is a frequent theme in these stories, and it may indicate either AI or TI scoring. Learning how to operate a machine is in itself indicative only of task imagery. However, when a long-term goal is in evidence, or the learner sets high standards of performance for himself or in comparison with others, score AI.

Example 13 - 2M
It is 5:27 pm. I was just learning to work on my first motor. Mr. J is teaching me some hints. I like studying engines. This is the best class of the day. I think I can fix this one. It won't be hard. I can see the engine turn over and run smoothly. I now know how to work on motors. (TI)

Example 14 - 2M
The boys are learning how to work the machines in the school machine shop. These are going to become machine operators after school. These boys have been practising to be other things but they only find machinery their only enjoyment. These boys want to become good machine operators, especially the Negro. The boys will become very good mechanics. (AI, N, ATH)

This last example is also a good indication of scoring on a "team" basis for this picture.

Picture 2 - Female

Three somewhat problematic themes arise in the stories for this picture. They concern getting jobs, raises, and promotions, and are occasionally found in stories written to other pictures as well.

Getting a job, like acquiring a skill (see picture 2M), is a theme that by itself seldom warrants AI scoring. Long-term involvement and setting high standards of work, however, justify AI.

Example 15 - 2F
I am the person. I am trying out to be a secretary. I need money. I had job but I got fired. I must get this job, I said to myself. I want this job. I will get the job. (TI)

Insofar as a promotion is a recognition of quality of work, desire for a promotion is usually interpreted as an achievement goal, since it can be inferred that the character is striving to perform well in order to get the promotion. Unless other motives are explicit, for example, wanting the promotion solely because of money it brings, AI is scored. Wanting a raise, however, does not suggest so strongly concern with quality of effort. Therefore, for "raise" themes to merit AI, they must mention explicitly some related achievement references.

Example 16 - 2F
The boss is talking to one of his employees. The people are the boss and two secretaries. The girl may have done something well and the boss may be telling her she may get a raise. She wants more money, and is thinking about what the boss has said. She will probably get nervous and not get the raise. (TI)

Because the achievement references are ambiguous (it isn't clear that she wanted to do something well), AI is not scored for this story. If the presence of AI has been established, the receipt of a raise or promotion is generally scored G+.

Picture 3 - Male

This picture provides the best example of "team" scoring possibilities. The achievement goal may be either an individual's (to steal a base or hit a home run) or common to a group (to win the game or the championship). On the other hand, this is probably the most difficult picture in the series with respect to decisions about the presence of achievement imagery. If there is no evidence of the game or activity being other than purely recreational (i.e., no concern with winning or quality of performance), the story is scored UI.

Example 17 - 3M
This is a group of men who work in an office. They decided to get some exercise in their lunch hour and the man who is batting suggested that they play a game of baseball on a lot across the street. Some boys from the neighbourhood were already playing there, and so the two teams played each other. (UI)

The wish to "get a hit" is distinguished from the wish to get an extra-base hit or home run for purposes of scoring AI. We assume that wanting to get a hit is the desire of every individual at bat, and since the desire does not constitute a greater-than-average concern with achievement, wanting to get a hit is scored TI only. (Compare this with "passing" imagery in picture 1.) Wanting to hit a home run, however, indicates more concern with quality of performance, since it is much more difficult to do. Such themes are taken to indicate the presence of achievement imagery. Similarly, wanting to strike out the batter on the part of the pitcher also indicates AI. In some cases, however, where actually getting a hit would represent a major achievement for the individual, and the desire for the hit is clearly expressed, AI would be warranted.

Example 18 - 3M
The batter is tense. He has to hit the ball or be the mule of the team. Bill, the best player on the baseball team, has been in a slump for three weeks and wasn't going to play but he begged the coach. Bill got to play and now it is the last inning with the tying run on third and all he is thinking is just one good hit. As the pitch is delivered he misses but he still has another chance with the pitcher tense he throws the ball. (AI, N, I, GA-, BP, ATH)

A statement of outcome ("they win the game") cannot be scored AI in the absence of an expressed desire for achievement.

Example 19 - 3M
They are playing a baseball game, and there are two girls who are watching the men play. The men got together last night and decided they would play ball today. The two girls said they would come out and watch. The man at bat wants a hit. He will hit a homerun and win the game. (TI)

An activity associated with this picture which may be indicative of either AI or TI is practice. The differentiation is made on the basis of presumed motivation for the practice. If quality of performance is the main concern, then practicing represents an achievement-related activity scored for AI; if fear of failure is the motive or an individual wants only to achieve a "normal" standard (cf. "passing" imagery in story one), score TI only. In doubtful cases, score TI.

Example 20 - 3M
Joe is practicing his hitting. He is going to play with some friends tomorrow and since he hasn't played in years, he is playing with the neighbourhood boys to try and get in shape so he won't strike out every time. (TI)

Example 21 - 3M
Bob, Paul, and Jim are practicing for the big game tomorrow. Joan and Ann are watching. Since they didn't have to practice after school they decided to practice among themselves. They thought that if they practice now that they would be a little bit better playing than usual. . . (AI, GA+)

Picture 3 - Female

The usual achievement goal in stories written to this picture is the preparation and/or serving of a meal that is better than average. The presence of an achievement motive can be interpreted from concern with the quality of the meal or instrumental activity implying competition with a standard of excellence. The two broad themes which present scoring difficulties are (1) disasters to the food and (2) the presence of guests.

In many stories, the key character is horrified to find the food burned or otherwise unfit for the meal. Such affective concern could have two sources: the failure of an attempt at a superior meal or fear of failure or of criticism. Only when it is clearly the first is AI scored for "food disaster" imagery. Keep in mind that in ordinary circumstances, persons sitting down to eat expect food to have been cooked long enough, to be present in sufficient quantities, and not to be burned. Unless there is further evidence of achievement motivation, concern with any of these issues merits only TI scoring.

Example 22 - 3F
Mrs. Stevens tensely prepared the meal. Her husband had invited his boss and wife to dinner. If everything goes well, it could mean a promotion for her husband, Rob. But if it didn't, who knows what could happen? She had never met them before. She is very nervous. She knows a good deal of how things went would depend on her. By the time they eat, Mrs Stevens is so nervous, she knocks her glass of water over onto the lap of the boss. She has such a frightened expression on her face that everyone laughs, and from there on the strain is gone. (AI, GA+, GA-, BP)

Despite the concern with interpersonal relationships, there is sufficient evidence here of the achievement motive to warrant AI scoring.

AI is scored for the wish to win the approval or friendship of others by means of culinary or related achievement. In the latter case a husband and wife "team" is often the unit for which the imagery is scored.

Example 28 - 3F
Mrs Burns husband has invited important guests over. Mr and Mrs Burns must be nice to the people because it depends on his job. Mrs Burns is thinking have I got everything right, is it going to help us or not. Mrs and Mr Burns have got their wish his salary is going up and he will become a boss. (AI, Ga-, G+)

Here the serving of a good meal is the intermediate goal in advancing the husband's career. Hoping that others in the story like the meal is scored AI only if it clearly implies concern with performance or an attempt to impress or win affiliation by means of achievement.

Example 23 - 3F
Mrs Robert Mackel just recently got married to Mr Mackel and they are living very happily together until she received a phone call from her in-laws saying they will be up to dinner the following day. Mrs Mackel is very nervous, she is thinking, what if they don't like my cooking? At this moment she wishes she was dead. (AI, GA-)

The fact that it is the "cooking" that she hopes her guests like is the clue indicating concern with quality of performance. It is possible that liking a meal could have more to do with the substance rather than the preparation. For example, there is a difference between hoping that one's guests like squid, and hoping that they will like the way one has prepared a squid dish. The second is more clearly achievement-related than the first. Unless it is clear that quality of preparation or

style of serving the meal is the meaning intended, assume that the substance of the meal is meant, and score TI for "hoping they like the meal" and similar phrases.

Example 24 - 3F
The girl is looking to see if the supper is burned. The girl, the boy, and the man and woman. The man and woman coming for dinner. They call up ask to come to dinner. The girl hopes that the people will like the dinner. The man and woman are please about the dinner. They say they will come again. (TI)

Example 25 - 3F
Mrs Openshaw is doing the last minute touches on the table as her husband meets his boss and wife at the door. She is wondering whether what she has fixed will be alright. If it will be too crisp. If there will be too much sauce on it. Her husband has to make a good impression on his boss so he can get a raise. His wife is a perfect cook. He gets the raise plus a bonus. (AI, N, GA-, G+)

The phrase "wanting to please" and others like it are scored for N only for this picture, since achievement here is so closely interrelated to social interactions. In other pictures, there is generally too much affiliative content to score N for such phrases. If the presence of achievement imagery has been established, compliments given to the hostess and referring to the meal are scored G+, under the assumption that they evoke pleasurable affect. Achievement thema (ATH) is scored in this picture when the motive for making a superior meal is internalized, i.e., when the wife cooks for the pleasure of doing it well. When there is a social motive (as in wanting to please or impress others), or the effort is colored by fear of failure of criticism, ATH is <u>not</u> scored. As a result, ATH is scored less frequently in stories written to this picture than to any other.

Picture 4 - Male and Female

In many of the stories written to this picture, the characters are depicted as working towards some goal such as the discovery of a cure or a new drug. In such cases, it is helpful to consider the degree of internalization of motive in assessing whether or not to score AI. At one end of the scale are those persons who have been assigned to do some research, or are fulfilling some externally imposed obligation. TI is scored in such instances, even if the result is a unique accomplishment, since there is no evidence of a prior motive to achieve. On the other hand, when individuals are self-motivated to achieve some end, AI is usually scored. In doubtful cases, assume internal motivation and score AI.

Example 26 - 4M
Two brothers named Spencer and Eddie are trying to save their sister from some disease. The sister named Sue was near this disease carried by cows. The boys have to save their sister. The serum that can save her. Sue wants the serum. The sister will be saved and the boys will be happy. This serum will be put on the market to help others. (AI, N, G+)

Example 27 - 4F
Sue and Mary were working for the hospital. They are looking at germs through a microscope. There had been a new disease brought into the hospital and nobody knew what it was. Sue and Mary were doing research on it because their patient was going to die and his life depended on their research. Sue and Mary worked long hours, somtimes 20 hours a day. But they could find nothing. Soon the patient died. Sue and Mary are still working but still have not found anything. (AI, I, ATH)

Note that, in a sense, the element of competition in these stories is with nature. Visualizing the stories in this fashion may help to make clear whether AI should be scored.

The presence of achievement imagery should not be scored where the major theme of the story is the satisfaction of curiosity, or the accomplishments are fortuitous and no prior achievement goal was in evidence. Where curiosity is interwoven with what are clearly achievement themes, AI is scored. Otherwise, curiosity indicates TI.

Example 28 - 4F
Miss Philips and her friend have just discovered an unusual type of microscopic organism. While testing some pond water they discover these creatures. They look like nothing they have ever seen before. What could they be? They could be some type of germ which causes a disease. They remember all the fish in the pond were dying and they discovered it was because of this organism. (TI)

Note, however, that there are varying degrees of fortuitousness. One can be "experimenting," trying all sorts of combinations in an apparently haphazard fashion, and still have a very clear notion of the general kind of end product desired. On the other hand, "fooling around" with no clear goal other than diversion, may still result in a unique accomplishment. AI is scored in the first case; TI in the second and in doubtful instances.

Example 29 - 4M
David Hannibal and Bob McNeir have discovered a type of disease they call Dianasesialintis. They had one night been observing bread under the microscope when they observed small black germs under the microscope. They immediately discovered what the germ was. They gave their discovery to the science museum in Washington. (TI)

Example 30 - 4M
Oscar and Sam are looking in a microscope for an experiment and they find that they have invented a new type atom. They become famous and win a Nobel award. (TI)

N is scored even when the goals expressed are general and altruistic. This is particularly important in those stories related to finding cures and other products beneficial to mankind.

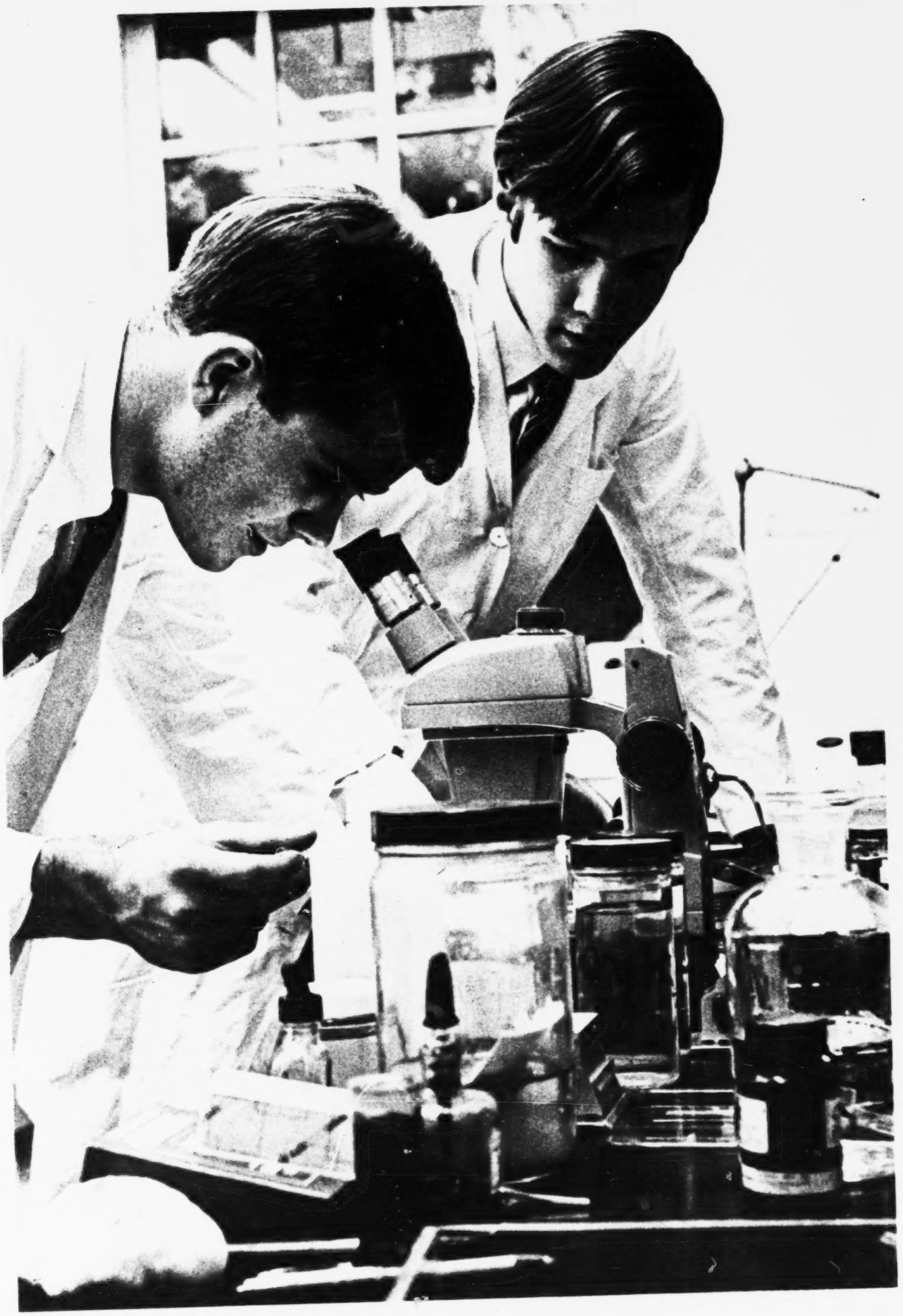
Example 31 - 4F
Two girls are doing an experiment to find a cure for a new disease. A small child has the disease and the two girls want to save her life. If the experiment is not a success the child will die. The experiment was not a success but the child lived and no one knows why. (AI, N)

APPENDIX A: GREENBERGER - ENTWISLE PICTURES

1. Male Series

2. Female Series

ZERO-MAT



APPENDIX B: A SUMMARY OF THE SCORING RULES

General Rules:

(1) Score only the imagery relating to key character(s) or team(s) given in Table 1.

(2) Examine "nonsense" stories carefully for achievement imagery.

AI, TI, UI

(1) Ignore the first sentence unless the story consists of one sentence or less.

(2) Compare story goal with normal standard of work required in situation.

(3) Compare story goal with abilities and limitations of character.

TI and UI

(4) When both present, score TI unless unrelated imagery clearly outweighs task imagery in importance to the story.

N

(1) Don't score needs for social approval, autonomy, curiosity-satisfaction, avoiding punishment, and avoiding failure.

(2) Don't score external obligation.

(3) Score wanting to impress others by means of achievement.

(4) Assume "He/she/they want ..." where omitted in section 3 of outline questions, if response to "By whom?" refers to a key character.

(5) Score "dreaming" conservatively.

(6) Score "hope things turn out" if goal is an achievement one.

I

(1) Score only if activity is clearly related to attaining achievement goal.

(2) Score past or future activity only if <u>manner</u> of activity suggests striving to attain achievement goal.

GA

(1) Don't score if the anticipation is <u>clearly</u> the subject's ("I expect...") rather than a story character's ("He expects...").

BP, BW

(1) Unsuccessful experiments in past scored BP unless failure was clearly beyond character's control, in which case nothing is scored.

NUP

(1) Score nurturance even when it fails to help character reach achievement goal.

(2) Do not score nurturance unrelated to achievement goal.

(3) Do not score nurturance given after goal is reached, unless recognition, etc., is defined as part of achievement goal.

G

(1) Do not score fortuitous endings and those unrelated to character's activities.

(2) Do not score affect of other than key character(s).

ATH

(1) Score only if story suggests personal success is primary motive of the key character(s).

1M & 1F

(1) Score "passing" themes AI only if there is great desire to pass and it would represent a substantial achievement for the story character.

(2) If "passing" and "good grades" imagery both present, score AI.

(3) Score "wanting the answer" themes AI only if there is additional emphasis on quality of performance in achieving the answer.

2M

(1) Don't score learning new skills AI unless there is a long-term goal in evidence or learner sets high performance standards.

2F

(1) Don't score "getting a new job" themes AI unless long-term involvement or high performance standards mentioned.

(2) Score "promotion" themes AI unless there is contradictory evidence in the story.

(3) Score "raise" themes AI only when additional achievement references are present.

(4) Score getting raises and promotions for G.

3M

(1) Score UI if game is purely recreational.

(2) Score "home run" themes AI.

(3) Score "wanting a hit" themes AI only if there is great desire and it represents a substantial achievement for the story character.

(4) Score themes of wanting to strike out the batter AI.

(5) Score "wanting to win" themes AI. Do not score AI merely when the outcome is winning, but no motive to win was evident earlier.

(6) Score "practice" themes AI only if superior quality of future performance is the main concern.

3F

(1) Score goal of better-than-average meal for AI.

(2) Do not score "not enough food," "burned food" and similar failure themes AI unless there is additional <u>positive</u> evidence of an achievement motive.

(3) Score "winning approval of others" themes AI if approval is sought by means of culinary or related achievement.

(4) Score "hoping others like the meal" themes AI only if concern with performance or impressing other by means of achievement is clearly implied.

(5) Score "wanting to please" themes for N.

(6) Score compliments for G+.

(7) Score ATH only when motive for making superior meals is completely internalized.

4M & 4F

(1) Score TI unless motivation is or could be regarded as predominantly internalized.

(2) Consider competition present in "striving-to-find-a-cure" themes on the grounds that man is pitted against nature.

(3) Don't score curiosity-satisfaction themes AI.

(4) Don't score stories with fortuitous achievement endings AI.